

WHAT IS CLAIMED IS:

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1. A composite squirrel cage rotor, comprising:
a rotating shaft;
a polymer resin part containing powder of high magnetic permeability; and
a squirrel cage conductor positioned around the outer part of the polymer resin part,
formed of material having high electric conductivity and provided with a plurality of axial
slots;
wherein said powder of high magnetic permeability is uniformly distributed in the
polymer resin part.
2. The rotor according to claim 1, wherein said slots of the squirrel cage
conductor are provided with a plurality, of heat pipes, respectively.
3. The rotor according to claim 1, further comprising an inner core of high
magnetic permeability so as to improve the performance of the motor by increasing the
magnetic flux density of the rotor.
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4. The rotor according to any of claims 1 to 3, wherein chopped fibers are added
to said polymer resin part in order to enhance the mechanical properties such as thermal
stability and stiffness of the rotor structure.
5. A method for fabricating a squirrel cage rotor, said, rotor having a rotating
shaft, a plurality of conductor bars, two end rings and a polymer resin part, comprising the

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removing the jig from each conductor bar;

grinding the outer surface of composite squirrel cage rotor combined with squirrel cage conductor and the polymer resin part.

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